

Abstract

An improved apparatus and method for capturing and analyzing the end-tidal portion of an exhalation. The CO<sub>2</sub> level of air drawn into the system (10) is monitored to distinguish inhalation and exhalation of  
5 breath. Upon detection of a decrease in the CO<sub>2</sub> level in the air drawn into the system (10), indicating a transition between exhalation and inhalation a pair of flow selector valves (26, 28) are operated to capture the end-tidal volume of air drawn into the system (10) immediately prior to the detection of the decrease in the CO<sub>2</sub> level. Incoming air is diverted  
10 around the captured volume of air, and the CO<sub>2</sub> levels are continually monitored to ensure that the captured volume of air corresponds to the end-tidal portion of an exhalation. Once the captured volume of air is positively identified as the end-tidal portion of an exhalation, the captured volume is routed through a gas analyzer (44) for analysis of  
15 one or more predetermined gas levels.